Amesbury Public Schools
Summary of Student Achievement and Growth Data
December 2021

The following data provides information regarding the impact of COVID-19 and subsequent implementation of different learning models (e.g., full remote, hybrid) on the student academic achievement and growth in Early Literacy Skills, Reading, English Language Arts and Mathematics. MCAS data as well as results of local assessments administered in the Fall of 2019 (prior to the March 2020 COVID-19 Emergency closure) to this Fall 2021, when schools were back to full time in-person instruction were reviewed.

As a district leadership team we were most interested in determining what, if any, interrupted learning patterns emerged when analyzing DIBELS, NWEA MAP, and MCAS data. Results were analyzed in the aggregate and by specific identified groups for deeper understanding of the potential gaps in student learning.

Massachusetts Comprehensive Assessment Systems (MCAS)

MCAS English Language Arts and Mathematics assessments are administered to all students in grades 3-8 and 10 in the Spring of each school year. Due to the Pandemic, MCAS assessments in 2020 were cancelled. As a result of the various models of education implemented by Massachusetts districts, the 2021 MCAS assessments were an abbreviated version of the full assessment that had previously been administered to students. Furthermore, districts were allowed to administer the testing via computer or paper version, remotely or in the school setting. Given the circumstances of the test administration, MCAS results and any decisions based on those results should be done with caution.

MCAS English Language Arts

Participation in the 2021 MCAS ELA test was significantly lower than the previous test administration in 2019. We hypothesize this is due to both a decrease in enrollment, as well as the decision for many families to have students home schooled for the 2020-2021 school year. In addition, at the Middle School a significant number of families of 6th grade students did not have their students participate in the MCAS Testing. We also had a much larger percent of students participating in the Alternative Assessment designed for students who are educated in substantially separate settings with cognitive delays that do not allow them to access material at or just below grade level with mastery.

Participation in the 2019 and 2021 MCAS ELA Tests

	Standard Assessment		ALT Assessment		Absent/Did Not Test	
Grade Span	2019	2021	2019	2021	2019	2021
Elementary (Gr 3-4)	333	249	4	11	1	7
Middle School (Gr 5-8)	639	586	4	6	10	41*
High School (Gr 10)	157	134	0	1	2	8

**25 students in Grade 6 did not participate in MCAS ELA Testing in the Spring of 2021.*

Elementary (Grade 3-4) ELA Achievement and Growth Results

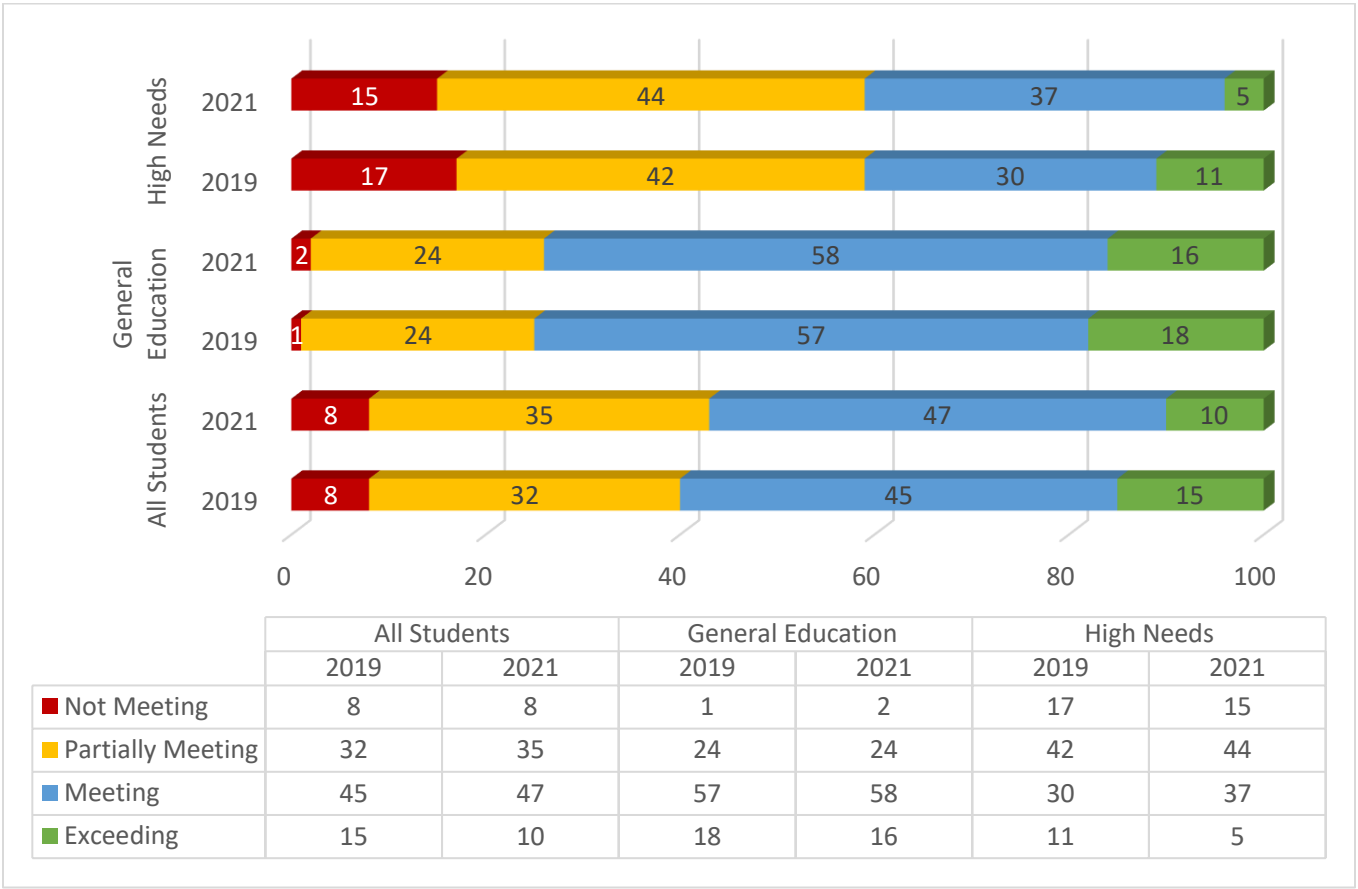
At the Elementary grades the largest difference in MCAS scores from 2019 and 2021 is in the category of exceeding which went from 15% to 10%. However, when compared to the state, Elementary students in Amesbury had 7% percent more students earning scores in the meeting and exceeding categories. In addition, Amesbury had fewer percent of students in the not meeting category, 12% for the state compared to 8% for APS.

Elementary (Grades 3-4) MCAS Results

MCAS ELA Performance Level	Amesbury		State	
	2019	2021	2019	2021
Exceeding	50 (15%)	25 (10%)	10%	8%
Meeting	150 (45%)	117 (47%)	45%	42%
Partially Meeting	106 (32%)	86 (35%)	38%	39%
Not Meeting	27 (8%)	21 (8%)	8%	12%

MCAS ELA Elementary Results by Subgroup

The gap between the results of general education students and students identified as high needs continues to be an area of concern. However, the gap does not appear to have widened on MCAS as a result of the interrupted learning due to COVID. Fewer High Needs students in 2021 earned scores in the not meeting category compared to 2019 results. This is important since just over half (52%) of the students who participated in the 2021 MCAS were identified as high needs, this is an increase from the 44% in 2019.



	All Students		General Education		High Needs	
	2019	2021	2019	2021	2019	2021
Not Meeting	8	8	1	2	17	15
Partially Meeting	32	35	24	24	42	44
Meeting	45	47	57	58	30	37
Exceeding	15	10	18	16	11	5

There are no previous MCAS scores for students in Grades 3 and 4 to generate a student growth percentile.

Middle School* MCAS *ELA Achievement and Growth Results

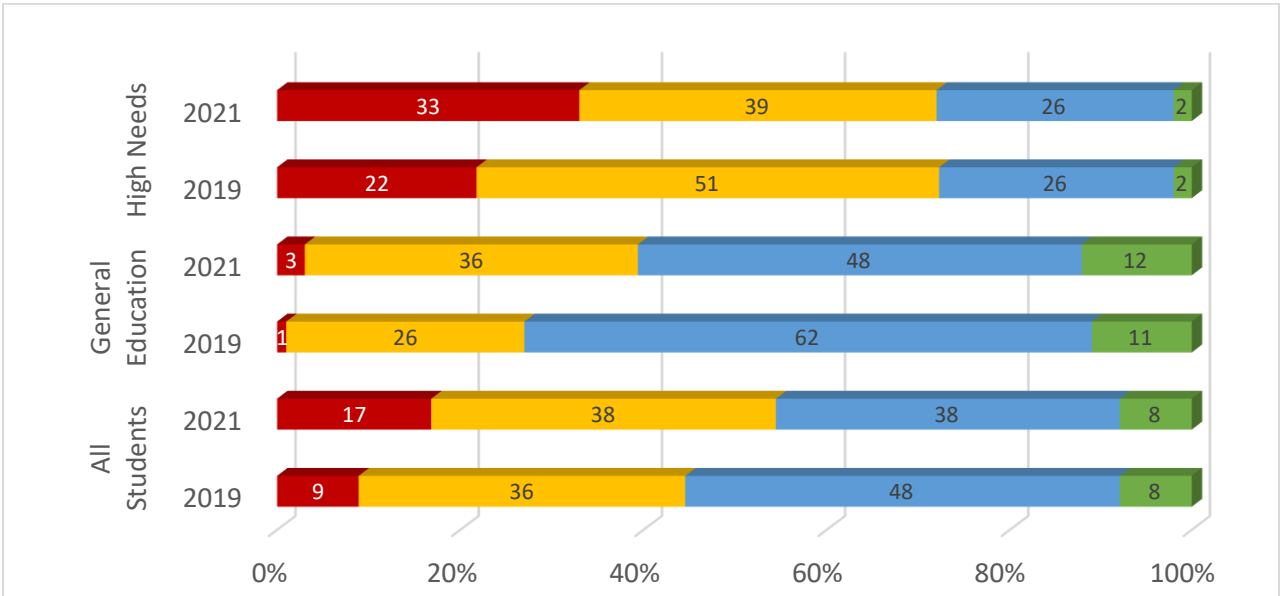
Results of 2021 MCAS Math shows nearly twice the percent of students earning scores in the "not meeting" category compared to 2019. In addition, the percent of students meeting grade level expectations as indicated on MCAS decreased by 10% from the previous test administration (48% to 38%). Although these decreases were noted, the results of Amesbury middle school students were very similar to state results in 2021.

Middle School (Grades 5-8) MCAS Achievement Results

MCAS ELA Performance Level	All Students		State	
	2019	2021	2019	2021
Exceeding	49 (8%)	45 (8%)	8%	8%
Meeting	305 (48%)	224 (38%)	41%	36%
Partially Meeting	227 (36%)	220 (38%)	39%	38%
Not Meeting	58 (9%)	97 (17%)	12%	18%

MCAS ELA Middle School Results by Subgroup

Both High Needs and General education students data indicate a negative shift in scores from 2019 to 2021, with fewer percent of students meeting or exceeding grade level expectations. However, highlighted in the data below is the significant gap in achievement between general education students and students identified as high needs. A third of students (33%) in the high needs category earned scores in "not meeting" in 2021 – this is an increase of 11% from 2019. Only 3% of general education students scored in the not meeting category.



	All Students		General Education		High Needs	
	2019	2021	2019	2021	2019	2021
Not Meeting	9	17	1	3	22	33
Partially Meeting	36	38	26	36	51	39
Meeting	48	38	62	48	26	26
Exceeding	8	8	11	12	2	2

Middle School MCAS ELA Student Growth Percentile (SGP) Results

The SGP for students declined significantly in 2021, however, these results were similar across the state. Of particular interest in the results is the increase in the highest level of growth for general education and high needs students.

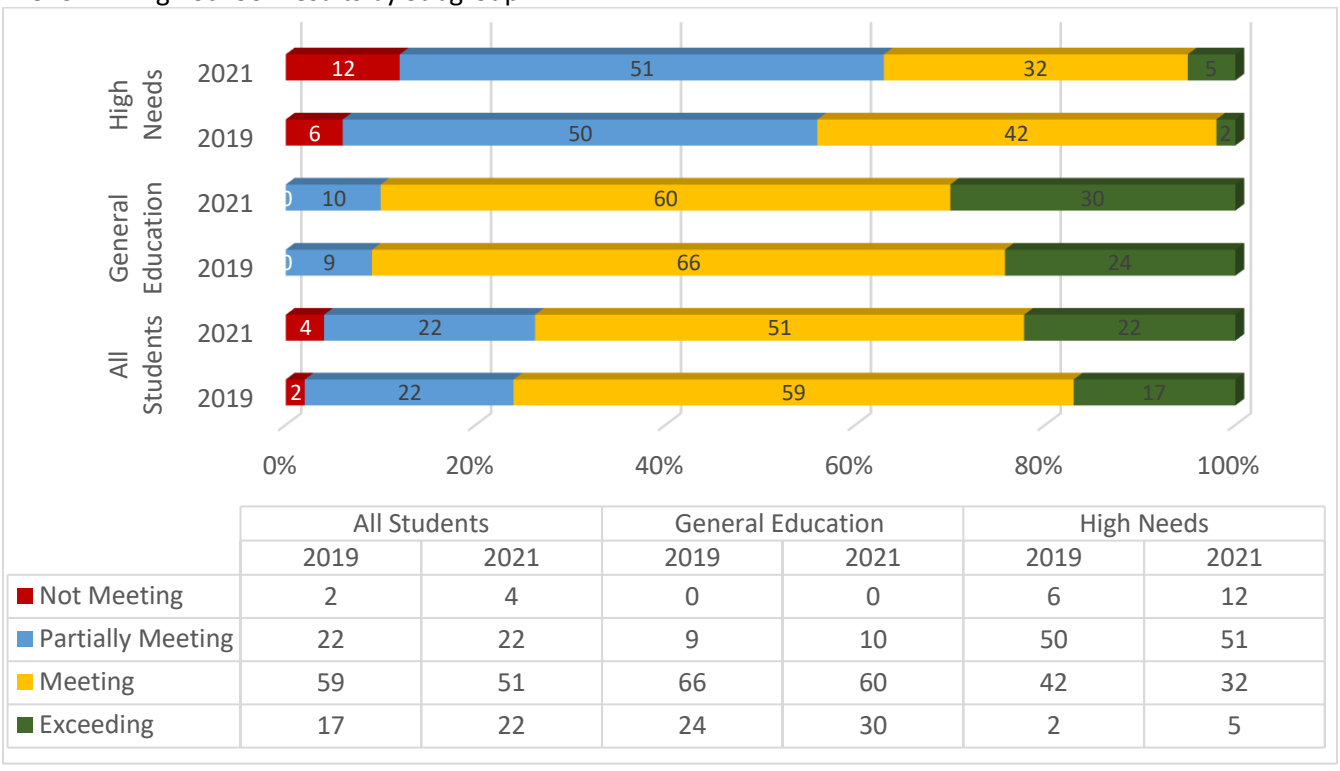
	ALL		STATE	General Education		High Needs	
	2019	2021	ALL 2021	2019	2021	2019	2021
Average SGP	52.0	36.0	35.8	55.1	39.6	47.0	31.5
SGP Levels							
High (61-99)	21%	24%		24%	28%	16%	18%
Typical (40 – 60)	43%	16%		44%	18%	41%	15%
Low (1-39)	36%	60%		32%	53%	43%	67%

High School ELA Achievement and Growth Results

Overall, results of the 10th Grade MCAS ELA are relatively high. The percent of students earning scores in the highest category of exceeding increased by 5% in 2021. Furthermore, the state percent of students in "not meeting" is more than twice as much as results in Amesbury, 9% and 4% respectively.

MCAS ELA Performance Level	**All Students**		**State**	
	2019	2021	2019	2021
Exceeding	27 (17%)	30 (22%)	13%	19%
Meeting	92 (59%)	69 (51%)	48%	45%
Partially Meeting	35 (22%)	30 (22%)	31%	27%
Not Meeting	3 (2%)	5 (4%)	8%	9%

MCAS ELA High School Results by Subgroup



	All Students		General Education		High Needs	
	2019	2021	2019	2021	2019	2021
Not Meeting	2	4	0	0	6	12
Partially Meeting	22	22	9	10	50	51
Meeting	59	51	66	60	42	32
Exceeding	17	22	24	30	2	5

When scores are compared between general education and students identified as high needs (students with disabilities, English learners, and economically disadvantaged) there is a significant gap in achievement. This gap appears to have been exacerbated by the interrupted learning due to COVID. On the 2021 MCAS ELA assessment, 90% of general education students earned scores in meeting or exceeding compared to just 37% of students identified as high needs. In addition, twice the percent of high needs students earned scores in not meeting in 2021 compared to 2019.

High School MCAS ELA Student Growth Percentile (SGP) Results

The average student growth percentile for 10th grade students in Amesbury declined slightly from 2019, but remains high compared to the state average. Similar to achievement results, there is a gap between the average SGP for general education and students in the high needs categories. However, in 2021, that gap closed from 17.5 in 2019 to 9.6 in 2021.

	ALL		STATE	General Education		High Needs	
	2019	2021	ALL 2021	2019	2021	2019	2021
Average SGP	61.1	58.8	52.5	66.7	61.7	49.2	52.1
SGP Levels							
High (61-99)	28%	54%		32%	58%	18%	45%
Typical (40 – 60)	51%	21%		53%	20%	48%	24%
Low (1-39)	21%	25%		15%	23%	34%	30%

MCAS Mathematics

Participation in MCAS Math is similar to ELA, in that significantly fewer students participated in the assessment. It is noted that the number of students taking Alternative Assessments increased at each grade level span, as did the number of students who did not test due to absences, medical excusal, or refusal.

Participation in the 2019 and 2021 MCAS ELA Tests

	Standard Assessment		**ALT Assessment**		**Absent/Did Not Test**	
Grade Span	2019	2021	2019	2021	2019	2021
Elementary (Gr 3-4)	333	245	5	12	1	10
Middle School (Gr 5-8)	631	582	5	6	13	47*
High School (Gr 10)	156	133	0	1	2	9

**28 students in Grade 6 did not participate in MCAS ELA Testing in the Spring of 2021.*

Elementary Math Achievement and Growth Results

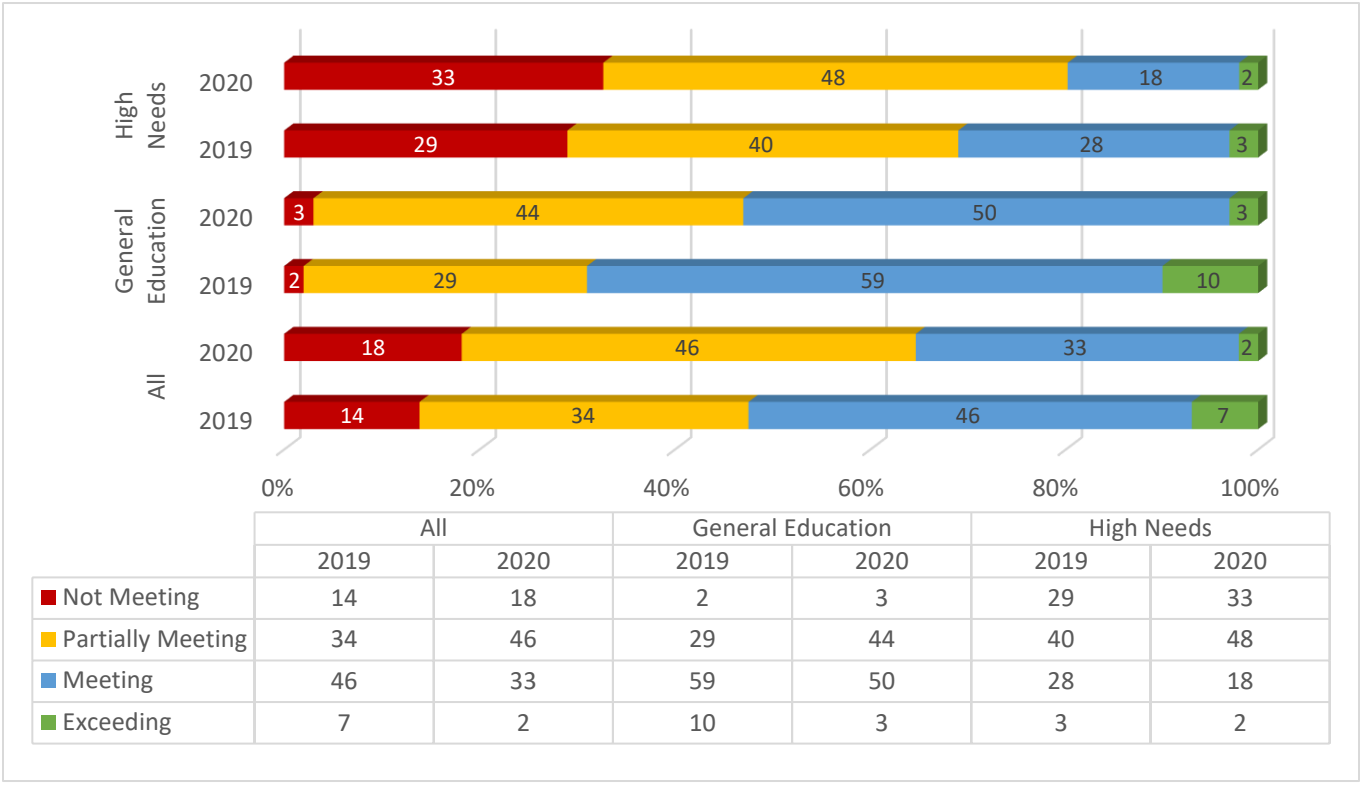
The decline in Mathematics at the Elementary level was much more substantial than what was noted in ELA. The percent of students in the top categories (exceeding and meeting) decreased from 53% in 2019 to 35% in 2021, an 18% difference. The state also saw a significant decrease of 15% in these categories.

Elementary (Grades 3-4) MCAS Results

MCAS Math Performance Level	Amesbury		State	
	2019	2021	2019	2021
Exceeding	23 (7%)	6 (2%)	8%	5%
Meeting	152 (46%)	81 (33%)	41%	29%
Partially Meeting	112 (34%)	113 (46%)	39%	36%
Not Meeting	46 (14%)	45 (18%)	12%	25%

MCAS Math Elementary Results by Subgroup

The gap between the achievement of general education students and students identified as high needs is an area of concern, especially with the percent of students not meeting grade level expectations as assessed on MCAS. The high needs subgroup makes up over half (53%) of students tested in 2021. Of this group, 33% earned scores in "not meeting". A shift towards lower scores was also noted for general education students, although not as severe.



	All		General Education		High Needs	
	2019	2020	2019	2020	2019	2020
Not Meeting	14	18	2	3	29	33
Partially Meeting	34	46	29	44	40	48
Meeting	46	33	59	50	28	18
Exceeding	7	2	10	3	3	2

Middle Math School Achievement and Growth Results

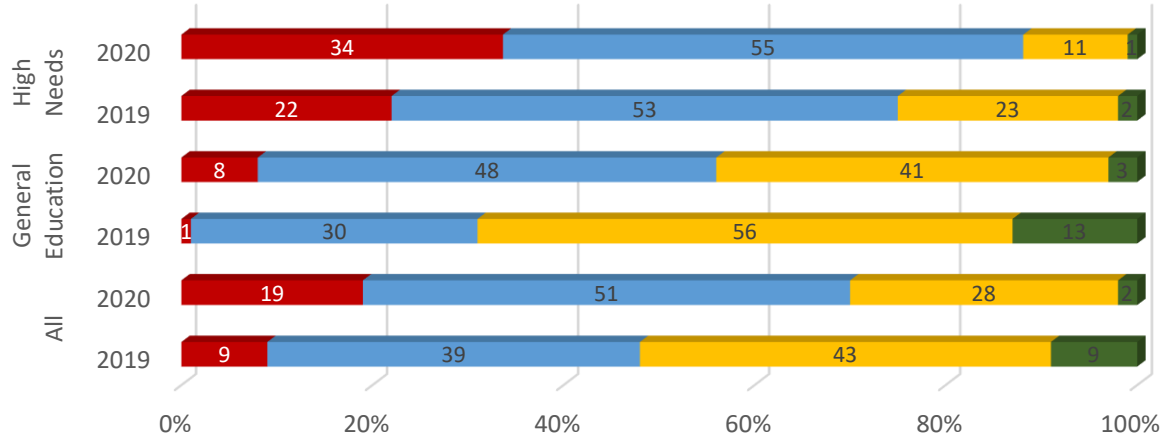
The effect of interrupted learning appears to be much more substantial for students math skills than ELA. Similar to Elementary scores, middle school math scores had a dramatic decrease in the percent of students earning scores in the categories of exceeding or meeting; with 22% fewer students in 2021 than in 2019. In addition, data also indicates a 10% increase in the percent of students not meeting state expectations. State average scores show a similar pattern.

Middle School MCAS Math Achievement

MCAS Math Performance Level	Amesbury		State	
	2019	2021	2019	2021
Exceeding	54 (9%)	12 (2%)	9%	5%
Meeting	274 (43%)	160 (28%)	40%	29%
Partially Meeting	246 (39%)	296 (51%)	40%	46%
Not Meeting	57 (9%)	112 (19%)	11%	21%

MCAS Math Middle School Results by Subgroup

The math achievement gap between the high needs subgroup and general education peers increased during the interrupted learning due to COVID. This was most notable at the "not meeting" category, where the gap increased from a difference of 21% in 2019 to 26% in 2021.



	All		General Education		High Needs	
	2019	2020	2019	2020	2019	2020
Not Meeting	9	19	1	8	22	34
Partially Meeting	39	51	30	48	53	55
Meeting	43	28	56	41	23	11
Exceeding	9	2	13	3	2	1

Middle School MCAS Math Student Growth Percentile (SGP) Results

Growth data compares student scores from the current test administration to previous administrations. This year, scores were compared to 2 years ago. Both at the district and state level, math growth data was extremely low. This decline was noted for general education and high need students alike.

	ALL		STATE	General Education		High Needs	
	2019	2021	ALL 2021	2019	2021	2019	2021
Average SGP	61.1	36.3	30.4	65.0	31.1	54.5	34.1
SGP Levels							
High (61-99)	54%	20%		60%	19%	45%	21%
Typical (40 – 60)	19%	15%		18%	16%	20%	14%
Low (1-39)	27%	65%		22%	65%	35%	66%

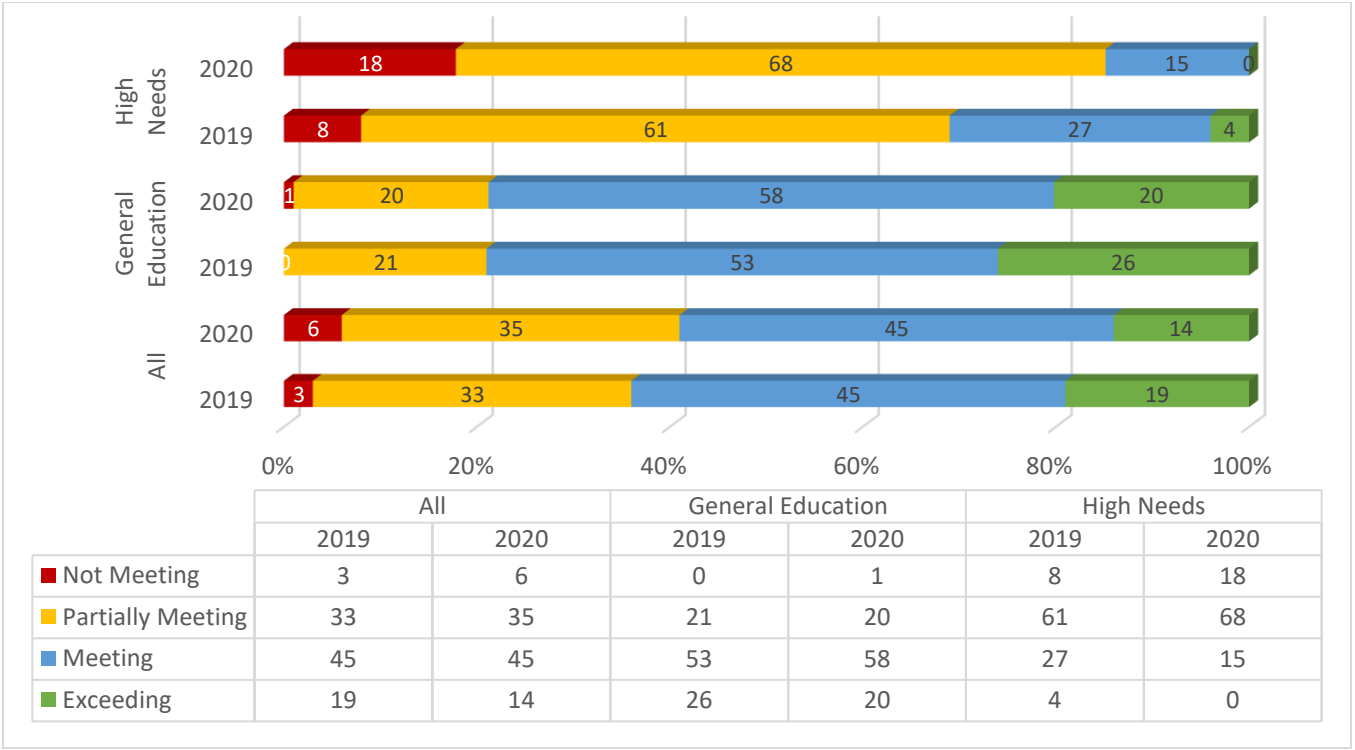
High School Math Achievement and Growth Results

Overall, the interrupted learning appears to have had a relatively minimal effect on MCAS Math results for high school age students. Slightly fewer students earned scores at the top end of "exceeding" and in the lowest level of "not meeting." Similar results were seen at the state level.

MCAS Math Performance Level	Amesbury		State	
	2019	2021	2019	2021
Exceeding	30 (19%)	19 (14%)	13%	11%
Meeting	70 (45%)	60 (45%)	45%	41%
Partially Meeting	52 (33%)	46 (35%)	33%	36%
Not Meeting	4 (3%)	8 (6%)	9%	12%

MCAS Math High School Results by Subgroup

The results by subgroup indicate a very different response to the interrupted learning due to COVID as measured by achievement on MCAS Math. Approximately 1/3 of students taking the MCAS in 10th grade are identified by the high needs subgroup (students with disabilities, English learners and economically disadvantaged) category. The percent of students in the high needs not meeting state expectations more than doubled from 2019. In addition, only 15% of students in high needs met or exceeded standards, compared to 78% of general education peers.



	All		General Education		High Needs	
	2019	2020	2019	2020	2019	2020
Not Meeting	3	6	0	1	8	18
Partially Meeting	33	35	21	20	61	68
Meeting	45	45	53	58	27	15
Exceeding	19	14	26	20	4	0

High School MCAS Math Student Growth Percentile (SGP) Results

Growth data compares student scores from the current test administration to previous administrations. This year, scores were compared to 2 years ago. Both at the district and state level, math growth data was low. This decline was noted for general education and high need students alike.

	ALL		STATE	General Education		High Needs	
	2019	2021	ALL 2021	2019	2021	2019	2021
Average SGP	47.9	37.5	36.5	48.4	38.0	47.0	36.4
SGP Levels							
High (61-99)	33%	24%		30%	26%	38%	19%
Typical (40 – 60)	27%	21%		31%	20%	19%	25%
Low (1-39)	40%	54%		39%	54%	43%	56%

NWEA Measures of Academic Progress (MAP)

MAP assessments in Reading and Mathematics are administered to students online three times each school year to benchmark student achievement and growth. Students in Grades 2-8 participate in the MAP assessments. Due to the DIBELS data for early elementary grades, grade 2 scores will only be shared for MAP Math. Fall 2019 performance level results (pre-COVID) were compared to Fall 2021 performance level results for Elementary and Middle School students. In addition to achievement, growth data for students were reviewed. Specifically, we assessed the growth of students by comparing their national percentile rank on MAP in 2019 and 2021.

MAP Reading Achievement

Overall, the most notable decline in MAP Reading achievement scores were at the Elementary level, where 7% more students earned scores in the Low range (18%) in Fall of 2021, then in the Fall of 2019 (11%). When analyzing grade level results, it was noted that the interrupted learning had the most significant impact on the students currently in Grade 4.

	High		High Average		Average		Low Average		Low		
Elementary (Gr 3-4)	**#**	**%**	**#**	**%**	**#**	**%**	**#**	**%**	**#**	**%**	**Total**
Fall 2019	87	29%	83	28%	59	20%	35	12%	33	11%	297
Fall 2021	60	26%	58	25%	40	17%	33	14%	43	18%	234

Students in Middle school, however, had higher overall reading achievement this Fall than the Fall of 2019. The percent of Middle School students earning scores in the highest categories of high/high average increased from 51% to 59%.

	High		High Average		Average		Low Average		Low		
Middle School (Gr 5-8)	**#**	**%**	**#**	**%**	**#**	**%**	**#**	**%**	**#**	**%**	**Total**
Fall 2019	134	23%	164	28%	123	21%	80	14%	81	14%	582
Fall 2021	144	25%	196	34%	101	17%	85	15%	53	9%	579

MAP Reading Achievement by Grade Level

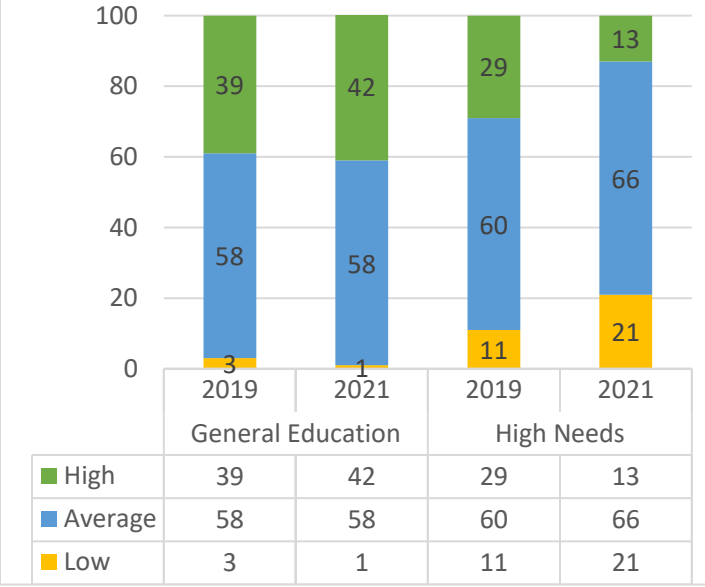
	High %	Average %	Low %	Total # of Students		High %	Average %	Low %	Total # of Students
Grade 3					**Grade 6**				
Fall 2019	28	59	13	136	Fall 2019	28	54	18	141
Fall 2021	29	57	14	107	Fall 2021	17	73	11	146
Grade 4					**Grade 7**				
Fall 2019	30	59	10	161	Fall 2019	21	68	11	139
Fall 2021	23	55	22	127	Fall 2021	23	66	11	161
Grade 5					**Grade 8**				
Fall 2019	28	61	11	167	Fall 2019	15	70	16	135
Fall 2021	36	56	8	127	Fall 2021	25	68	7	145

Data from the MAP Reading by grade level does not show any consistent pattern of results. Four of the grade levels had increases in the percent of students earning scores in the highest category, with some as much as a 10% improvement from the previous administration. The impact of the interrupted learning appears to have had the most impact on Grades 4, which declined in "high" and increased by 12% in the "low" category.

MAP Reading Achievement by Subgroups

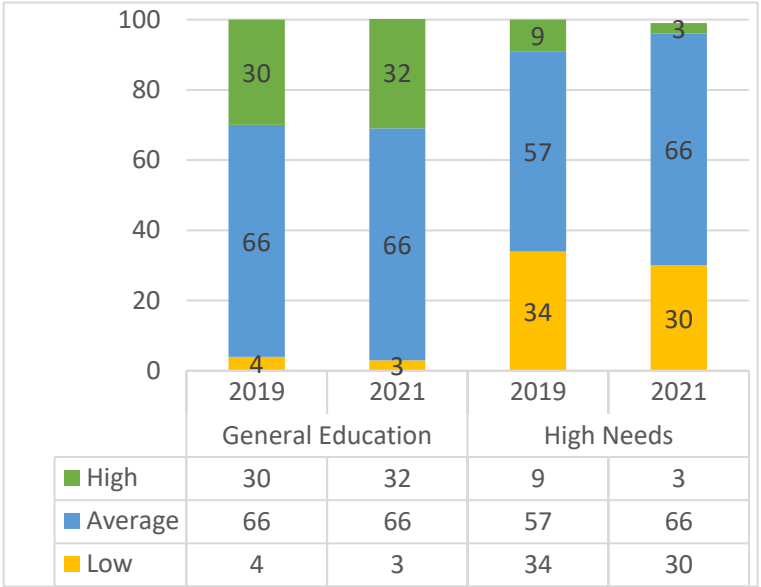
Approximately one third (1/3) of tested students meet the definition of high needs (e.g., students with disabilities, English learners, and/or economically disadvantaged). While the elementary data indicates a significant gap between general education students and high needs students exists, the scores are consistent from 2019 to 2021. In middle school, the gap appeared to increase significantly from 2019 to 2021.

Elementary (Gr 3-4)



	2019	2021	2019	2021
	General Education		High Needs	
High	39	42	29	13
Average	58	58	60	66
Low	3	1	11	21

Middle (Gr 5-8)



	2019	2021	2019	2021
	General Education		High Needs	
High	30	32	9	3
Average	66	66	57	66
Low	4	3	34	30

MAP Mathematics Achievement

Results from the MAP assessment indicate that Math scores at the Elementary level were significantly lower in 2021 than in 2019. The percent of students earning scores in the lowest categories (low average/low) increased by 13%, from 25% in 2019 to 38% in 2021. In addition, the percent of students in the highest category (high) decreased by 4%. Math

results at the Middle School were less notable at the lowest levels, but had a 6% difference in students earning scores in the highest level, decreasing from 23% to 17% in 2019 and 2021 respectively.

	High		High Average		Average		Low Average		Low		
Elementary (Gr 2-4)	**#**	**%**	**#**	**%**	**#**	**%**	**#**	**%**	**#**	**%**	**Total**
Fall 2019	97	27%	100	28%	76	21%	48	13%	42	12%	363
Fall 2021	82	23%	92	26%	47	13%	63	18%	71	20%	355

	High		High Average		Average		Low Average		Low		
Middle School (Gr 5-8)	**#**	**%**	**#**	**%**	**#**	**%**	**#**	**%**	**#**	**%**	**Total**
Fall 2019	132	23%	166	29%	130	23%	90	16%	59	10%	577
Fall 2021	97	17%	154	27%	157	27%	100	17%	71	12%	579

MAP Mathematics Achievement by Grade Level

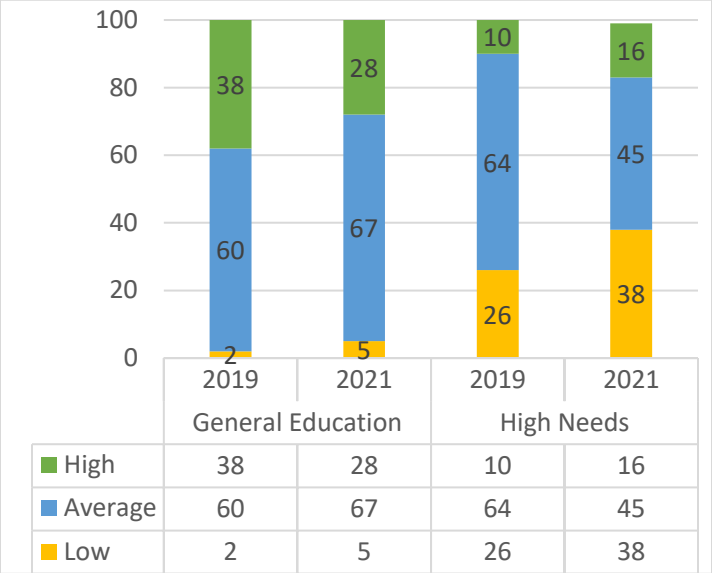
In general, a pattern emerged across grade levels in Math that indicates a significant decrease in the percent of students earning scores in the "high" category of MAP math. This decline was noted in every grade level except 7th. The decrease ranged from a high of 17% in Grade 2 to 6% in Grades 5 and 8. The percent of students earning scores in the "low" category saw slight increases across all grade levels except 5th. The largest increase in this category was in Grade 4 where data indicate the percent of students earning scores in the "low" category more than doubled.

	High %	Average %	Low %	Total # of Students		High %	Average %	Low %	Total # of Students
Grade 2					**Grade 5**				
Fall 2019	34	49	17	112	Fall 2019	26	62	12	165
Fall 2021	17	62	20	121	Fall 2021	20	68	11	124
Grade 3					**Grade 6**				
Fall 2019	21	70	10	136	Fall 2019	21	69	10	152
Fall 2021	13	71	16	106	Fall 2021	9	78	12	148
Grade 4					**Grade 7**				
Fall 2019	24	67	9	160	Fall 2019	17	69	14	135
Fall 2021	9	67	23	128	Fall 2021	17	68	16	159
					Grade 8				
					Fall 2019	27	69	5	125
					Fall 2021	21	70	9	148

MAP Mathematics Achievement by Subgroups

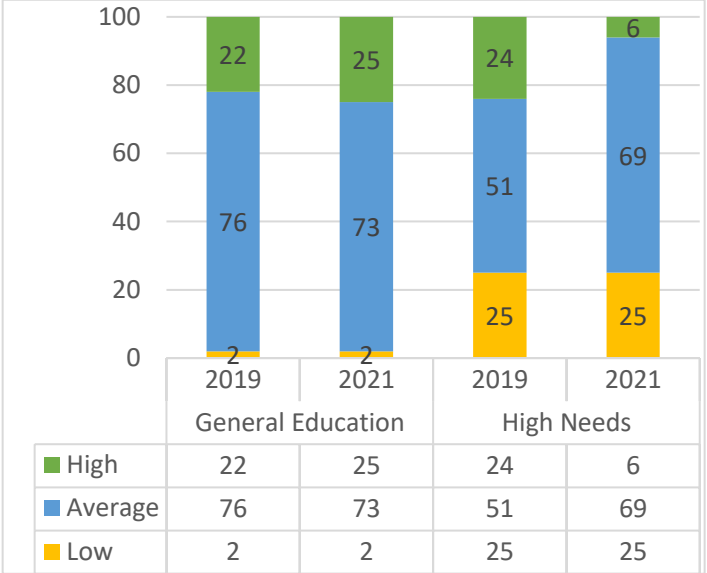
According to the demographic data, nearly 40% of students tested on MAP Math were identified as "high needs" (students with disabilities, English learners, and/or economically disadvantaged). Results show a significant gap in achievement between general education students and students identified as "high needs" and at the elementary school level, this gap widened during the period of interrupted learning (COVID). More than a third (38%) of high needs students in the elementary school grades 2-4 earned scores in the lowest category as compared to 5% of general education students.

Elementary Data by Subgroups



	2019 General Education	2021 General Education	2019 High Needs	2021 High Needs
High	38	28	10	16
Average	60	67	64	45
Low	2	5	26	38

Middle School Data by Subgroups



	2019 General Education	2021 General Education	2019 High Needs	2021 High Needs
High	22	25	24	6
Average	76	73	51	69
Low	2	2	25	25

Dynamic Indicators of Basic Early Literacy Skills (DIBELS)

DIBELS are a set of individually administered benchmark assessments of early literacy skills that are most highly correlated with students reading skills. Skills assessed include letter naming, phonemic sequencing, nonsense word fluency, oral reading fluency, and comprehension. An overall composite score is provided as a result of the combination of the different assessed skills. The composite scores were used for this analysis.

Fall 2019

Grade	Core Support #	Core Support %	Strategic Support #	Strategic Support %	Intensive Support #	Intensive Support %	Total
Kindergarten	48	38%	21	17%	58	46%	127
Grade 1	51	48%	24	22%	32	30%	107
Grade 2	73	53%	31	22%	35	25%	139
Grade 3	99	75%	18	14%	15	11%	132
Total	**271**	**54%**	**94**	**19%**	**140**	**28%**	**505**

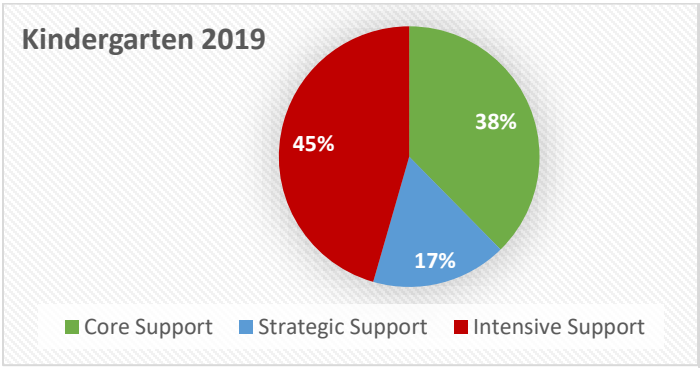
Fall 2021

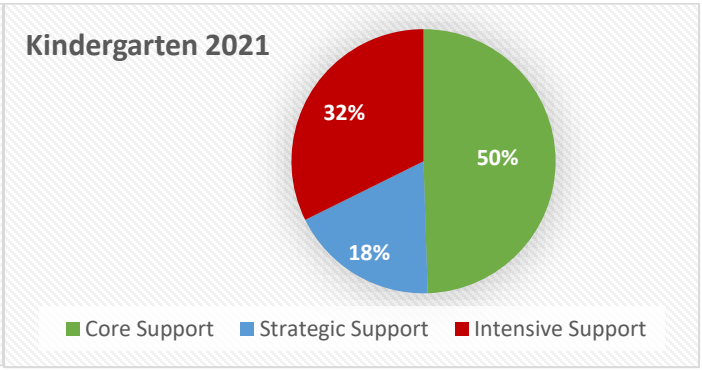
Grade	Core Support #	Core Support %	Strategic Support #	Strategic Support %	Intensive Support #	Intensive Support %	Total
Kindergarten	63	49%	23	18%	41	32%	127
Grade 1	41	37%	28	25%	42	38%	111
Grade 2	53	48%	16	14%	43	38%	112
Grade 3	63	63%	18	17%	21	20%	105
TOTAL	**220**	**48%**	**85**	**19%**	**147**	**32%**	**455**

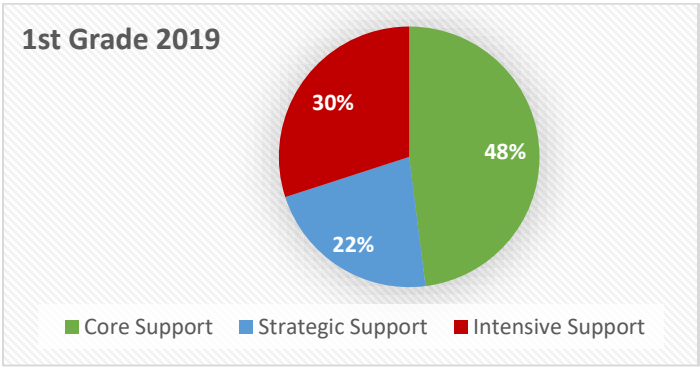
A quick review of the difference in DIBELS for grades K-3 combined indicates a small decline in overall results with approximately 4% more students earning scores indicating a need for more intensive support in early literacy skills

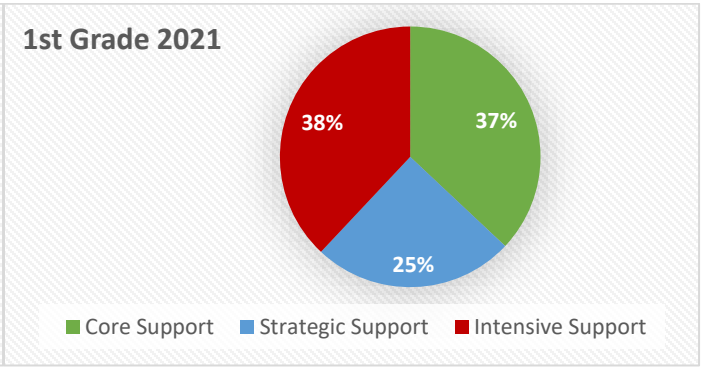
development and 6% fewer students in students meeting grade level expectations or the core support category between 2019 and 2021. Further analysis indicates more significant differences at the individual grade levels (see charts below).

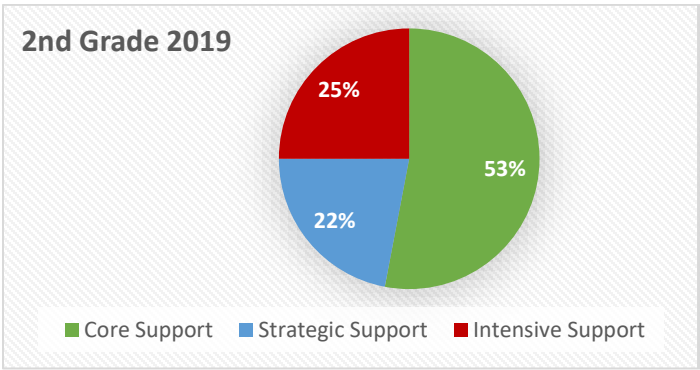
DIBELS Performance Level Results by Grade Level

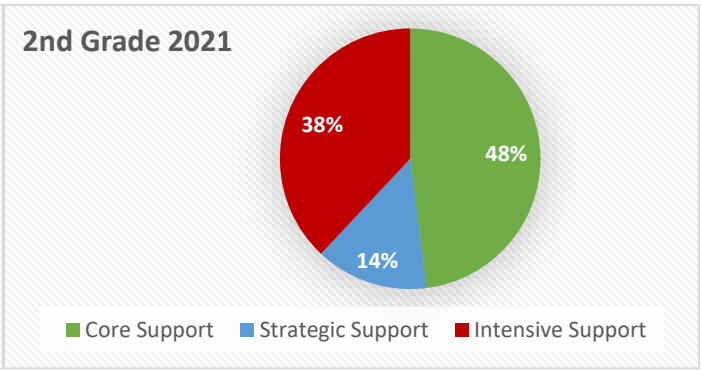


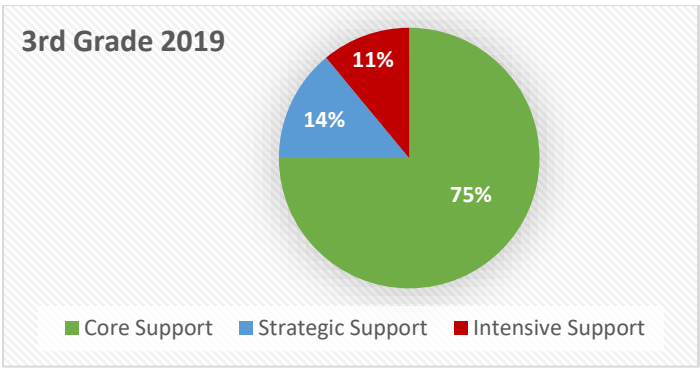


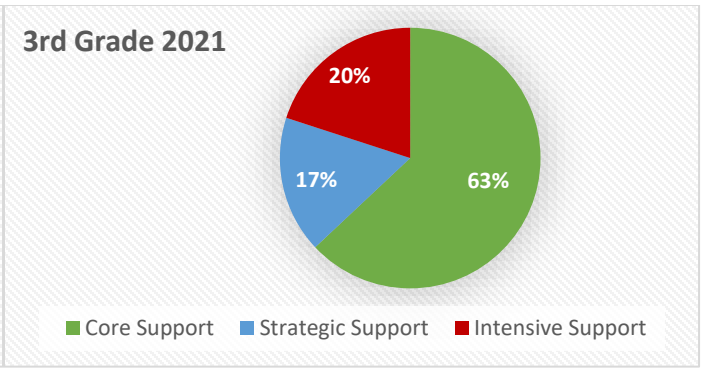








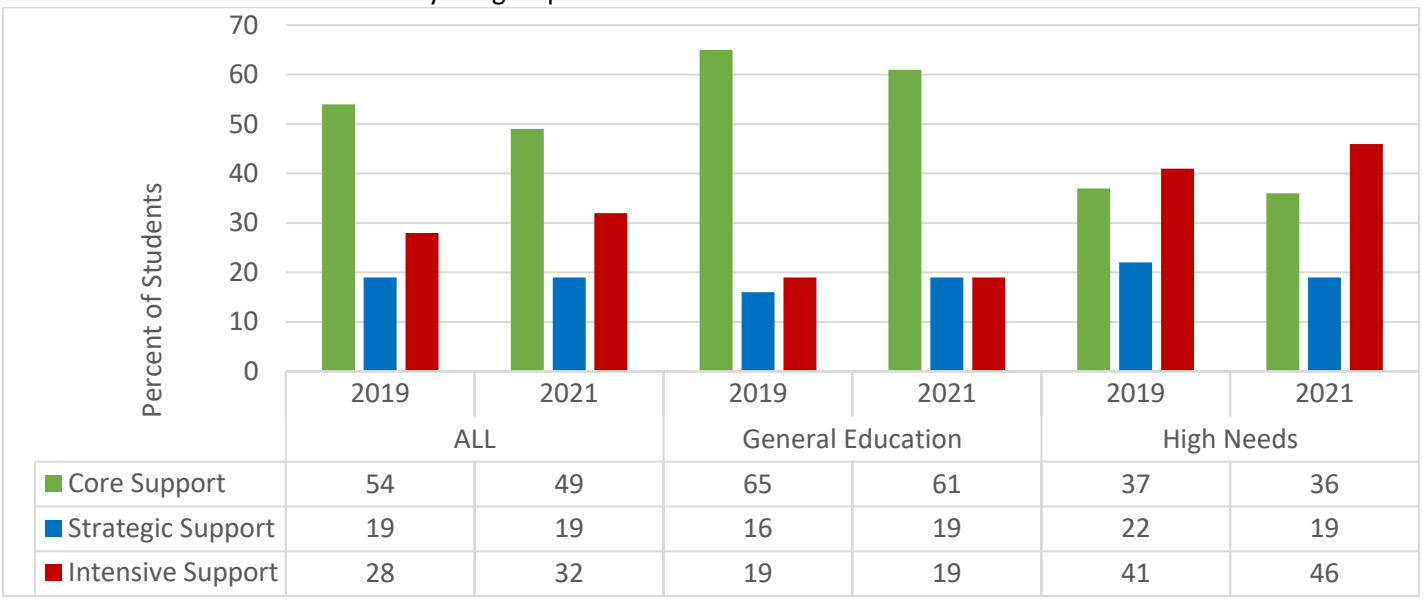




DIBELS Performance Level Results by Subgroups

DIBELS data were also reviewed for differences between students identified as general education students and those in the high needs subgroups (i.e., students with disabilities, English Learners, and economically disadvantaged). Results from this analysis provide evidence that students in the high needs categories are nearly twice as likely to need intensive support in early literacy skills. In addition, the effects of the interrupted learning had more of a negative impact on early literacy skills with this group of students.

DIBELS Performance Level Results by Subgroups



	2019	2021	2019	2021	2019	2021
	ALL		General Education		High Needs	
Core Support	54	49	65	61	37	36
Strategic Support	19	19	16	19	22	19
Intensive Support	28	32	19	19	41	46
Total Students	505	455	300	371	205	202

Summary and Key Takeaways from 2021 Student Achievement Data

As indicated in the opening paragraphs, the leadership team analyzed results to determine what, if any, interrupted learning patterns emerged when analyzing DIBELS, NWEA MAP, and MCAS data.

From MCAS and MAP Achievement Data:

- The interrupted learning, as a result of COVID, appeared to impact math scores more than reading scores.
- A significant discrepancy exists between the achievement results of general education students and students identified as high needs (i.e., students with disabilities, English learners, and economically disadvantaged). This gap appeared to have widened as results of the interrupted learning.

From DIBELS Data:

- A positive trend was noted in Kindergarten, where 12% more students earned scores in the “core” support in 2021 than in 2019, while 13% fewer students scored in the “intensive” support category.
- Data indicate students in Grade 2 as having the most significant decline in early literacy skills as a result the change in instructional learning models (i.e., full remote, hybrid) during the 2020-2021 school year.
- Evidence that students in the high needs categories are more than twice as likely to need intensive support in early literacy skills than their general education peers.